

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An optical refractive index-modifying polymer composition comprising as a main component a polymer (A) which is a polymer of monomers including as an essential component an acrylic vinyl monomer represented by the following formula (1):



wherein R^1 represents a hydrogen atom or a methyl group, R^2 represents a saturated or unsaturated hydrocarbon group having 1 to 20 carbon atoms, and the molecule may contain a hetero atom or a halogen atom,

wherein the polymer (A) contains a remaining radical-polymerizable side-chain vinyl group in the molecule, and the composition comprises a thermally curable polymer (B) in an amount of 5 to 60 parts by weight per 100 parts by weight of the polymer (A), and

wherein the acrylic vinyl monomer is a vinyl methacrylate, vinylethyl methacrylate, vinylloctyl methacrylate, vinylhexyl methacrylate, vinylbutyl methacrylate, vinyl acrylate, or vinylethyl acrylate.

2. (original): The optical refractive index-modifying polymer composition according to claim 1, wherein an increase in refractive index (Δn) before and after irradiation is 0.005 or more when the composition is irradiated with a light in an ultraviolet region in an integrated light quantity of 10 J/cm^2 or less.

3. (previously presented): The optical refractive index-modifying polymer composition according to claim 1, wherein a difference (Y-X) between refractive index (X) after modulating refractive index upon irradiation and further thermally curing the thermally curable polymer (B)

upon heating at a temperature equal to or higher than the curing temperature of the thermally curable polymer (B) and refractive index (Y) when the composition is subsequently irradiated with a light in an ultraviolet region in an integrated light quantity of 1 J/cm^2 or less, is 0.003 or less.

4. (previously presented): The optical refractive index-modifying polymer composition according to claim 1, wherein tacticity of the polymer (A) is 70% or more as syndiotacticity (rr).

5. (previously presented): The optical refractive index-modifying polymer composition according to claim 1, wherein the thermally curable polymer (B) is a thermally curable polymer having at least two epoxy groups in the molecule.

6. (original): The optical refractive index-modifying polymer composition according to claim 5, which contains the thermally curable polymer (B) in an amount of 5 to 35 parts by weight per 100 parts by weight of the polymer (A).

7. (previously presented): The optical refractive index-modifying polymer composition according to claim 1, wherein the curing temperature of the thermally curable polymer (B) is 150°C or lower.

8. (previously presented): The optical refractive index-modifying polymer composition according to claim 1, which contains at least one selected from a photoinitiator, a sensitizer, a chain transfer agent, and a thermally acid-generating agent.

9. (previously presented): A hologram recording material comprising the optical refractive index-modifying polymer composition according to claim 1.

10. (previously presented): A method of controlling refractive index comprising modulating refractive index upon irradiating the optical refractive index-modifying polymer composition according to claim 1 with a light and subsequently thermally curing the thermally curable polymer (B) upon heating at a temperature equal to or higher than the curing

temperature of the thermally curable polymer (B).